

Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269



Scaled data based on original data using  
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P997919

Luminaire Tested: SA2XXDIP-B1005D530UB2750-4F0-XX-W2A-D\_5000K

Issue Date: 5/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P997919  
REPORT IS A COMBINATION OF REPORTS P983656 AND P1007351  
Test Lab: INNOVATION CENTER  
Issue Date: 5/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: SA2XXDIP-B1005D530UB2750-4F0-XX-W2A-D\_5000K  
Description: Define 2 Direct/Indirect Pendant with 5000K BioUP LEDs {m-DER=1.015} {m-EER=1.115}  
Light Source: -  
Ballast/Driver: -

**Summary**

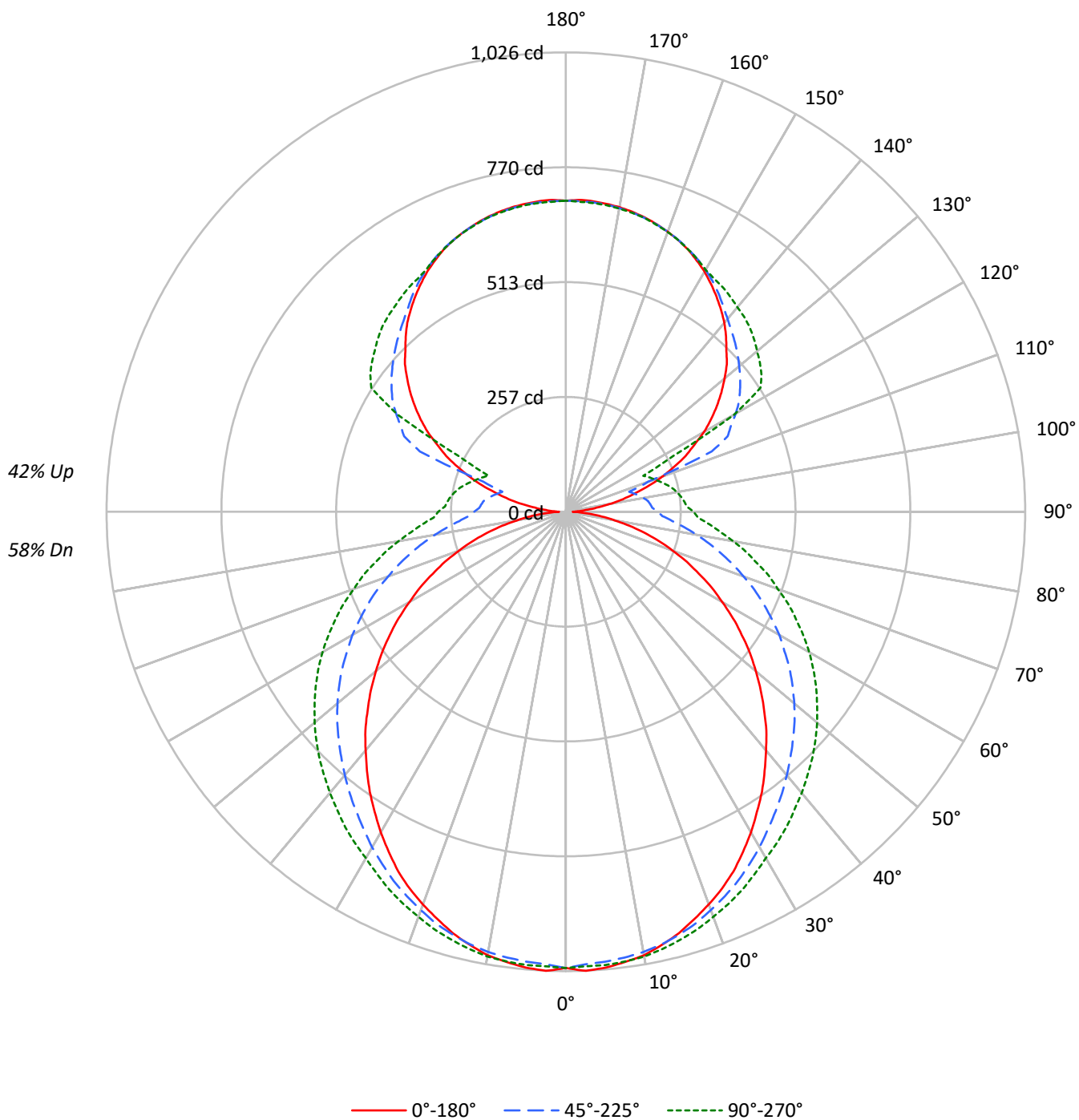
Lumens per Lamp: N/A  
Luminaire Lumens: 5926.0 lumens  
Efficiency: N/A  
Efficacy: 77.3 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.31 / 1.42  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.1')  
CIE Type: General Diffuse

Input Watts (W): 76.7  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT

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### Luminous Intensity Polar Plot



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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

|     |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |    |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|----|----|----|----|----|----|
| RF  | 20  |     |     |     | 20  |     |     |     | 20 |    |    |    | 20 |    |    |    | 20 |
| RC  | 80  |     |     |     | 70  |     |     |     | 50 |    |    |    | 30 |    |    |    | 10 |
| RW  | 70  | 50  | 30  | 10  | 70  | 50  | 30  | 10  | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 |
| RCR |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |    |
| 0   | 109 | 109 | 109 | 109 | 102 | 102 | 102 | 102 | 88 | 88 | 88 | 75 | 75 | 75 | 64 | 64 | 64 |
| 1   | 98  | 93  | 88  | 84  | 91  | 86  | 82  | 79  | 75 | 71 | 69 | 64 | 61 | 59 | 54 | 52 | 50 |
| 2   | 88  | 80  | 73  | 67  | 82  | 75  | 68  | 63  | 64 | 60 | 55 | 55 | 51 | 48 | 46 | 43 | 41 |
| 3   | 80  | 70  | 62  | 55  | 74  | 65  | 58  | 52  | 56 | 51 | 46 | 48 | 44 | 40 | 40 | 37 | 34 |
| 4   | 73  | 61  | 53  | 46  | 68  | 57  | 50  | 44  | 50 | 43 | 39 | 42 | 38 | 34 | 36 | 32 | 29 |
| 5   | 67  | 55  | 46  | 39  | 62  | 51  | 43  | 37  | 44 | 38 | 33 | 38 | 33 | 29 | 32 | 28 | 25 |
| 6   | 62  | 49  | 40  | 34  | 57  | 46  | 38  | 32  | 40 | 33 | 29 | 34 | 29 | 25 | 29 | 25 | 22 |
| 7   | 57  | 44  | 36  | 30  | 53  | 41  | 34  | 28  | 36 | 30 | 25 | 31 | 26 | 22 | 26 | 22 | 19 |
| 8   | 53  | 40  | 32  | 26  | 49  | 37  | 30  | 25  | 33 | 27 | 22 | 28 | 23 | 20 | 24 | 20 | 17 |
| 9   | 49  | 36  | 29  | 23  | 46  | 34  | 27  | 22  | 30 | 24 | 20 | 26 | 21 | 18 | 22 | 18 | 15 |
| 10  | 46  | 33  | 26  | 21  | 43  | 31  | 24  | 20  | 28 | 22 | 18 | 24 | 19 | 16 | 21 | 17 | 14 |

**AVERAGE LUMINANCE (cd/sqm):**

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 16130 | 16130 | 16130 |
| 5°  | 16202 | 15441 | 15354 |
| 10° | 16094 | 14906 | 14688 |
| 15° | 15867 | 14353 | 14006 |
| 20° | 15580 | 13772 | 13358 |
| 25° | 15298 | 13216 | 12771 |
| 30° | 14901 | 12651 | 12190 |
| 35° | 14500 | 12105 | 11764 |
| 40° | 14078 | 11634 | 11339 |
| 45° | 13674 | 11207 | 10970 |
| 50° | 13243 | 10813 | 10604 |
| 55° | 12787 | 10395 | 10233 |
| 60° | 12235 | 9958  | 9842  |
| 65° | 11653 | 9457  | 9392  |
| 70° | 11000 | 8921  | 8909  |
| 75° | 10159 | 8383  | 8452  |
| 80° | 8846  | 7821  | 7978  |
| 85° | 7515  | 7294  | 7570  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 13674 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 96.6   | 1.6       |
| 10°-20°   | 277.0  | 4.7       |
| 20°-30°   | 419.8  | 7.1       |
| 30°-40°   | 511.2  | 8.6       |
| 40°-50°   | 550.0  | 9.3       |
| 50°-60°   | 534.1  | 9.0       |
| 60°-70°   | 466.4  | 7.9       |
| 70°-80°   | 359.0  | 6.1       |
| 80°-90°   | 241.7  | 4.1       |
| 90°-100°  | 188.8  | 3.2       |
| 100°-110° | 206.6  | 3.5       |
| 110°-120° | 306.5  | 5.2       |
| 120°-130° | 420.2  | 7.1       |
| 130°-140° | 417.8  | 7.0       |
| 140°-150° | 374.0  | 6.3       |
| 150°-160° | 298.2  | 5.0       |
| 160°-170° | 192.1  | 3.2       |
| 170°-180° | 66.1   | 1.1       |
| 0°-30°    | 793.4  | 13.4      |
| 0°-40°    | 1304.6 | 22.0      |
| 0°-60°    | 2388.7 | 40.3      |
| 0°-90°    | 3455.8 | 58.3      |
| 90°-120°  | 701.8  | 11.8      |
| 90°-150°  | 1913.8 | 32.3      |
| 90°-180°  | 2470.0 | 41.7      |
| 0°-180°   | 5926.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|------|-------|------|-------|------|------|
| 0°   | 1019 | 1019  | 1019 | 1019  | 1019 |      |
| 5°   | 1022 | 1018  | 1009 | 1018  | 1016 | 97   |
| 15°  | 975  | 978   | 978  | 991   | 989  | 275  |
| 25°  | 886  | 896   | 910  | 927   | 932  | 407  |
| 35°  | 764  | 789   | 817  | 849   | 860  | 477  |
| 45°  | 626  | 666   | 718  | 764   | 778  | 483  |
| 55°  | 480  | 533   | 610  | 663   | 682  | 429  |
| 65°  | 328  | 400   | 487  | 548   | 567  | 326  |
| 75°  | 182  | 264   | 359  | 422   | 442  | 192  |
| 85°  | 53   | 145   | 239  | 301   | 322  | 56   |
| 90°  | 15   | 106   | 205  | 267   | 285  | 12   |
| 95°  | 44   | 97    | 189  | 248   | 265  | 48   |
| 105° | 160  | 218   | 158  | 215   | 233  | 172  |
| 115° | 295  | 320   | 399  | 210   | 190  | 290  |
| 125° | 412  | 418   | 475  | 518   | 533  | 368  |
| 135° | 507  | 515   | 534  | 571   | 581  | 392  |
| 145° | 587  | 586   | 595  | 607   | 612  | 367  |
| 155° | 646  | 642   | 648  | 650   | 646  | 298  |
| 165° | 681  | 678   | 679  | 683   | 679  | 192  |
| 175° | 696  | 693   | 694  | 697   | 692  | 66   |
| 180° | 695  | 695   | 695  | 695   | 695  |      |

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**CANDELA DISTRIBUTION (FULL):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 0°     | 1019.0 | 1019.0 | 1019.0 | 1019.0 | 1019.0 |
| 2.5°   | 1026.3 | 1021.9 | 1011.6 | 1019.0 | 1016.0 |
| 5°     | 1021.9 | 1017.5 | 1008.6 | 1017.5 | 1016.0 |
| 7.5°   | 1014.5 | 1011.6 | 1004.2 | 1014.5 | 1013.1 |
| 10°    | 1005.7 | 1002.7 | 998.3  | 1010.1 | 1008.6 |
| 12.5°  | 990.9  | 992.4  | 989.4  | 1001.2 | 999.8  |
| 15°    | 974.7  | 977.6  | 977.6  | 990.9  | 989.4  |
| 17.5°  | 954.0  | 959.9  | 964.3  | 977.6  | 977.6  |
| 20°    | 933.3  | 940.7  | 946.6  | 962.8  | 962.8  |
| 22.5°  | 911.2  | 920.0  | 928.9  | 945.1  | 948.1  |
| 25°    | 886.1  | 896.4  | 909.7  | 927.4  | 931.8  |
| 27.5°  | 856.5  | 872.8  | 887.5  | 909.7  | 912.6  |
| 30°    | 827.0  | 846.2  | 865.4  | 889.0  | 893.4  |
| 32.5°  | 794.5  | 816.6  | 840.3  | 868.3  | 877.2  |
| 35°    | 763.5  | 788.6  | 816.6  | 849.1  | 859.5  |
| 37.5°  | 729.5  | 757.6  | 793.0  | 828.5  | 838.8  |
| 40°    | 695.6  | 728.0  | 767.9  | 806.3  | 819.6  |
| 42.5°  | 663.1  | 695.6  | 742.8  | 785.6  | 798.9  |
| 45°    | 626.1  | 666.0  | 717.7  | 763.5  | 778.3  |
| 47.5°  | 590.7  | 633.5  | 692.6  | 739.9  | 756.1  |
| 50°    | 553.8  | 599.6  | 666.0  | 716.2  | 732.5  |
| 52.5°  | 518.3  | 567.1  | 638.0  | 689.6  | 707.4  |
| 55°    | 479.9  | 533.1  | 609.9  | 663.1  | 682.3  |
| 57.5°  | 443.0  | 502.1  | 578.9  | 636.5  | 655.7  |
| 60°    | 403.2  | 466.7  | 550.8  | 606.9  | 627.6  |
| 62.5°  | 367.7  | 434.2  | 518.3  | 578.9  | 598.1  |
| 65°    | 327.8  | 400.2  | 487.3  | 547.9  | 567.1  |
| 67.5°  | 292.4  | 367.7  | 456.3  | 516.9  | 537.5  |
| 70°    | 254.0  | 330.8  | 422.4  | 485.9  | 503.6  |
| 72.5°  | 218.6  | 298.3  | 391.3  | 453.4  | 475.5  |
| 75°    | 181.6  | 264.3  | 358.9  | 422.4  | 441.6  |
| 77.5°  | 146.2  | 231.9  | 327.8  | 391.3  | 412.0  |
| 80°    | 110.8  | 200.8  | 296.8  | 358.9  | 379.5  |
| 82.5°  | 81.2   | 169.8  | 267.3  | 329.3  | 348.5  |
| 85°    | 53.2   | 144.7  | 239.2  | 301.3  | 321.9  |
| 87.5°  | 32.5   | 121.1  | 215.6  | 276.2  | 295.4  |
| 90°    | 15.3   | 106.4  | 205.0  | 266.6  | 285.3  |
| 92.5°  | 25.9   | 102.2  | 193.7  | 252.3  | 270.6  |
| 95°    | 44.5   | 97.3   | 189.4  | 248.0  | 265.3  |
| 97.5°  | 69.1   | 91.4   | 185.1  | 241.2  | 259.5  |
| 100°   | 99.3   | 85.1   | 176.4  | 235.0  | 252.3  |
| 102.5° | 131.1  | 178.8  | 167.0  | 225.7  | 243.4  |
| 105°   | 160.2  | 218.1  | 157.7  | 214.9  | 233.1  |
| 107.5° | 195.9  | 243.9  | 148.4  | 204.1  | 222.3  |
| 110°   | 228.6  | 268.7  | 195.8  | 192.8  | 211.0  |

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**CANDELA DISTRIBUTION (continued):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|--------|-------|-------|-------|-------|-------|
| 112.5° | 260.8 | 293.4 | 352.9 | 183.4 | 201.2 |
| 115°   | 295.0 | 319.8 | 398.8 | 210.3 | 190.4 |
| 117.5° | 323.1 | 345.0 | 415.6 | 388.0 | 271.0 |
| 120°   | 356.3 | 369.7 | 437.9 | 485.3 | 433.7 |
| 122.5° | 384.5 | 394.0 | 458.7 | 501.6 | 515.4 |
| 125°   | 411.7 | 418.2 | 475.0 | 518.4 | 533.2 |
| 127.5° | 437.9 | 443.4 | 490.7 | 532.8 | 546.6 |
| 130°   | 462.5 | 469.0 | 505.6 | 546.5 | 557.8 |
| 132.5° | 487.6 | 492.7 | 520.3 | 558.8 | 570.1 |
| 135°   | 507.2 | 515.3 | 534.5 | 570.6 | 581.4 |
| 137.5° | 529.4 | 535.4 | 547.8 | 580.8 | 589.7 |
| 140°   | 551.0 | 553.5 | 562.0 | 590.1 | 596.4 |
| 142.5° | 569.1 | 571.1 | 577.6 | 599.3 | 604.2 |
| 145°   | 586.7 | 586.2 | 594.7 | 607.1 | 611.9 |
| 147.5° | 603.3 | 601.8 | 610.3 | 614.3 | 616.7 |
| 150°   | 619.3 | 615.8 | 623.9 | 626.9 | 624.4 |
| 152.5° | 632.9 | 628.9 | 636.4 | 639.5 | 635.9 |
| 155°   | 646.0 | 641.5 | 647.5 | 650.5 | 646.5 |
| 157.5° | 656.5 | 652.5 | 657.1 | 660.6 | 656.5 |
| 160°   | 665.6 | 662.6 | 665.6 | 668.6 | 665.1 |
| 162.5° | 673.6 | 670.6 | 673.1 | 676.7 | 672.1 |
| 165°   | 680.7 | 677.7 | 679.2 | 682.7 | 679.2 |
| 167.5° | 686.2 | 683.2 | 684.7 | 688.2 | 683.7 |
| 170°   | 690.7 | 687.7 | 688.7 | 692.2 | 687.7 |
| 172.5° | 693.7 | 690.7 | 691.7 | 695.3 | 690.7 |
| 175°   | 696.3 | 692.7 | 693.7 | 697.3 | 692.2 |
| 177.5° | 697.3 | 693.7 | 694.3 | 697.8 | 693.2 |
| 180°   | 694.8 | 694.8 | 694.8 | 694.8 | 694.8 |

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**CIE UGR TABLE:**

| Reflectances:   |      |                  |       |       |       |       |                |       |       |       |       |
|-----------------|------|------------------|-------|-------|-------|-------|----------------|-------|-------|-------|-------|
| Ceiling         |      | 0.7              | 0.7   | 0.5   | 0.5   | 0.3   | 0.7            | 0.7   | 0.5   | 0.5   | 0.3   |
| Wall            |      | 0.5              | 0.3   | 0.5   | 0.3   | 0.3   | 0.5            | 0.3   | 0.5   | 0.3   | 0.3   |
| Reference plane |      | 0.2              | 0.2   | 0.2   | 0.2   | 0.2   | 0.2            | 0.2   | 0.2   | 0.2   | 0.2   |
| Room dimensions |      | Viewed crosswise |       |       |       |       | Viewed endwise |       |       |       |       |
| X=2H            | Y=2H | 15.59            | 16.59 | 16.46 | 17.49 | 18.64 | 18.67          | 19.67 | 19.54 | 20.57 | 21.71 |
|                 | 3H   | 17.06            | 17.97 | 17.94 | 18.88 | 20.04 | 21.26          | 22.17 | 22.14 | 23.08 | 24.25 |
|                 | 4H   | 17.54            | 18.40 | 18.44 | 19.32 | 20.50 | 22.52          | 23.39 | 23.42 | 24.30 | 25.48 |
|                 | 6H   | 17.83            | 18.63 | 18.74 | 19.55 | 20.74 | 23.82          | 24.63 | 24.73 | 25.55 | 26.74 |
|                 | 8H   | 17.89            | 18.66 | 18.81 | 19.60 | 20.79 | 24.49          | 25.25 | 25.40 | 26.19 | 27.38 |
|                 | 12H  | 17.91            | 18.65 | 18.84 | 19.58 | 20.80 | 25.22          | 25.95 | 26.14 | 26.88 | 28.10 |
| 4H              | 2H   | 16.65            | 17.52 | 17.56 | 18.43 | 19.61 | 19.01          | 19.87 | 19.91 | 20.79 | 21.96 |
|                 | 3H   | 18.37            | 19.11 | 19.28 | 20.05 | 21.24 | 21.81          | 22.54 | 22.72 | 23.49 | 24.68 |
|                 | 4H   | 19.00            | 19.68 | 19.92 | 20.62 | 21.83 | 23.23          | 23.91 | 24.15 | 24.85 | 26.06 |
|                 | 6H   | 19.42            | 20.01 | 20.36 | 20.98 | 22.19 | 24.71          | 25.30 | 25.64 | 26.26 | 27.48 |
|                 | 8H   | 19.53            | 20.09 | 20.47 | 21.05 | 22.28 | 25.47          | 26.02 | 26.41 | 26.98 | 28.21 |
|                 | 12H  | 19.59            | 20.09 | 20.54 | 21.07 | 22.30 | 26.31          | 26.81 | 27.26 | 27.79 | 29.02 |
| 8H              | 4H   | 19.80            | 20.36 | 20.74 | 21.31 | 22.55 | 23.39          | 23.94 | 24.33 | 24.90 | 26.13 |
|                 | 6H   | 20.44            | 20.91 | 21.40 | 21.91 | 23.13 | 25.02          | 25.49 | 25.99 | 26.49 | 27.72 |
|                 | 8H   | 20.66            | 21.08 | 21.64 | 22.07 | 23.31 | 25.91          | 26.33 | 26.89 | 27.32 | 28.57 |
|                 | 12H  | 20.80            | 21.18 | 21.78 | 22.16 | 23.45 | 26.92          | 27.29 | 27.89 | 28.27 | 29.56 |
| 12H             | 4H   | 20.01            | 20.51 | 20.96 | 21.49 | 22.72 | 23.37          | 23.87 | 24.33 | 24.85 | 26.09 |
|                 | 6H   | 20.78            | 21.19 | 21.75 | 22.18 | 23.43 | 25.05          | 25.47 | 26.02 | 26.45 | 27.70 |
|                 | 8H   | 21.09            | 21.46 | 22.06 | 22.44 | 23.73 | 25.99          | 26.36 | 26.96 | 27.34 | 28.63 |